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**ECONOMIC AND INDUSTRIAL AFFAIRS**

**No. 2126**



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# EAST EUROPE REPORT

## ECONOMIC AND INDUSTRIAL AFFAIRS

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ERRATUM: In JPRS 77856 dated 16 April 1981, No 2116 of this series in article AGRICULTURAL PROBLEMS IN CCSR DISCUSSED, p 38, in third paragraph of line 1 change 5.78 million to read "5.78 billion" and in line 2 change 5.22 million to read "5.22 billion".

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FUTURE ECONOMIC DEVELOPMENT DIRECTIONS DISCUSSED

Prague SVET HOSPODARSTVI in Czech 3 Mar 81 pp 1, 2

[Text] The general policy for development of an advanced socialist society constitutes the basis of the continuing economic and social program of the CPCZ for the period of the Seventh Five-Year Plan.

The key objective of party policy, in spite of the substantially more difficult international and domestic conditions, is to maintain and improve the attained high standard of living of the citizenry and its social security in correspondence with the accomplishments which will be achieved in development of the national economy.

Nevertheless, due to a number of external and internal reasons, implementation of this goal will be extraordinarily demanding. We must particularly take into account the considerably worsened conditions and higher cost of procurement of requisite sources of fuels and energy, crude oil, metals, foodstuffs and other raw and finished materials from both imports or domestic production. Particularly more challenging will be acquisition of resources to pay for importation of high-grade fuels. We will have to come up to par with the increasing competition in Western markets and the increasing demands of both foreign customers and domestic consumers in regard to quality and technical level of products, slower increments in manpower and substantially limited investment opportunities, etc.

Attainment of the goals of the Seventh Five-Year Plan in this situation calls for systematically setting the course toward a constant growth of efficiency and quality of all labor by making an improved and more effective use of our production assets based on accelerated and maximum utilization of the results and findings of technoscientific development, increasing participation of the CSSR in international socialist division of labor, particularly with the USSR, and making improvements in planned managements while increasing participation by employees.

Implementation of the objectives of our economic and social policy requires creation of conditions for a 14-16 percent growth of the national income in the course of the Seventh Five-Year Plan and to cover 90-95 percent of that increment by increasing the social productivity of labor. To that end, it is inevitable that:

1. All sectors of the national economy must substantially improve utilization and more efficient and economic use of all types of fuels and energy, materials and

raw materials, as well as of existing fixed assets and manpower. The greatest attention will have to be paid herein to improving the quality and technical level of products as the decisive prerequisite for making better use of material resources and human labor. To accomplish this, it will also be necessary to systematically implement measures for improving the planned management system.

In the years 1981-1985 to instill in the national economy additional lowering of expenditures and increasing of return on investment in production assets:

-- by a clear-cut increase of savings both in the consumption of raw materials and other materials and their more effective utilization, and also by more efficient use to bring about maximum cuts in the demand of social production on materials; provide for its further development by substantially decreasing increments in domestic and imported sources of raw materials and energy or, eventually, by maintaining them at the already attained level. Upgrade indices and norms for consumption of fuels, energy, raw and other materials, and come up with suitable substitutions, particularly as regards consumption of imported materials. Increase the use of secondary raw materials and more effectively control their usage. Extraordinary efforts must be developed for economic use, application and saving of crude oil and natural gas which represent the most costly inputs into the economy.

In the years 1981-1985, to achieve in the national economy a minimum of 2 percent in average annual savings of fuels and energy and a 4.5 to 5 percent saving of metals in production and work out in detail and comprehensively implement the corresponding targeted state programs for improving the consumption of these basic sources of materials;

-- by a decisive reversal in the utilization of fixed assets. Main attention must hereby be paid to better utilization of available facilities and resources based on increased use of shift work, increasing the share of investments for renovation and progressive modernization, accelerating liquidation and removing obsolete and ineffective fixed assets from operation. Bring about a decisive decrease of excessive simultaneously ongoing investment construction, accelerate completion of construction projects, shorten construction deadlines and step up attainment of planned specific performance of production capacities launched into operation. Limit the extent of investments for new demanding large construction projects with a slow return on investments;

-- by meeting increases in production and output by increased labor productivity. In processing branches of industry, implement production increases without essentially increasing manpower. In the construction industry, even when changes are made in the structure of operations, provide for accelerated growth of labor productivity rather than the extent of construction work. Streamline and more effectively use available sources of manpower and available reserves for increasing labor productivity, primarily by improvements in organization of production and operations, making full use of idle manpower, introducing comprehensive mechanization and automation of production processes, modernizing obsolete production facilities and curbing the extent of ineffective administrative activities. Bring about improvements in the structure of personnel skills and qualifications and substantially improve utilization of highly qualified personnel to help improve the technical level and quality of production, and upgrade technological processes and organization of production.



2. The structure of production and dynamics of development must be systematically subordinated to the needs of effective development of the national economy, with emphasis on maximum growth of export deliver . . . a increase in output for exports and a decrease in the demands of the Czechoslovak economy for imports.

To that end, make structural changes in production, oriented first of all toward creating conditions for maximum growth of production for exports, preferably on the basis of improved quality and technical level of products. Support development of production which will be instrumental in lowering imports and increasing self-sufficiency of the Czechoslovak national economy in those sectors of production for the development of which the CSSR offers favorable natural and economic prerequisites.

3. Strive for more effective incorporation of the Czechoslovak economy into the international division of labor in such a manner as to have it make contributions to further growth of the technical level of production and increases in labor productivity. Strive also for lower demand of production for energy and materials and expand serial and efficient production.

Develop international socialist division of labor, look for new opportunities for its intensification, improvements in the form of socialist economic integration and closer linkage between the Czechoslovak economy and economies of the CEMA member countries, particularly the Soviet Union.

Continue international cooperation with nonsocialist countries in the sphere of economics, science and technology and in further fields on the basis of mutual advantages.

4. In order to deal with key problems regarding the development of a uniform Czechoslovak economy, orient the economic development of the CSR and the SSR toward an even more effective dealing with further proportional development of the Czechoslovak national economy.

5. Make further improvements in planned management of the national economy as one of the key instruments for dealing with tasks of continued social and economic development. By implementing the Set of Measures for Improving the Planned Management System and its further development, create prerequisites primarily for a systematic implementation of emphatic intensification, efficiency and export capability of the Czechoslovak economy.

The task of Czechoslovak science is to create new findings and make available the findings of international science for the needs of building an advanced socialist society. This calls for concentrating research resources on the key tasks of technoscientific development, a more systematic approach to integration of socialist science and implementing of new, more effective forms of transfer of scientific findings into social practice.

Implement at all levels of management an organic linkage of the plan for technical development with other components of the national economic plan, particularly the plan for completion of construction projects and the plans for replacement of capital assets. Make more adequate provisions than before so that tasks of the

plan for technical development and implementation of its results in production become a basis for the five-year plans for the development of Economic Production Units (VPU) and plants.

Concentrate efforts in management of technological development on a more effective implementation of the results of research and developmental projects and optimum utilization of purchased licenses. Planned implementation of the results of research and development efforts, and utilization of licenses and the results of technoscientific cooperation must be backed up by set priorities for tasks of the production plan and replacement of capital assets at all levels of management.

The decisive role in providing for continued growth of the national economy and its improved effectiveness will be played by industrial production. By 1985, its overall volume must increase 18-20 percent as compared to 1980. In view of the inevitable lowering of material expenditures in production, till 1985 there must be an accelerated increase of the overall volume of modified value-added figures. Key consideration in the development of industrial production must be given to the structure of production and its use primarily to achieve growth in deliveries for exports in 1985 by 32 to 35 percent (in foreign exchange) with a maximum increase in the quality and technical level of industrial products.

Labor productivity in industry must increase by a minimum of 17 to 19 percent and its growth must account for more than 90 percent of increments in production, primarily by means of making improvements in organization of production and operations, better utilization and further enhancement of technical equipment, more intense participation in the international division of labor as well as by developing socialist competition.

Increments in manpower must be concentrated primarily for increased use of shift-work in plants that help meet the tasks in exports and in newly built facilities, particularly in developmental sectors of production.

In individual industrial sectors implement the following key tasks:

At minimal increments in the availability of fuel and energy sources, the supreme task of economic policy in the area of fuels and energy will be accelerated lowering of the national economy's demand for energy. To achieve an even fuel and energy balance and further growth in national income, relative savings in 1985 will have to amount to approximately 12 million tnp [tons of standard fuel] as compared to 1980.

Some 99 to 100 tons of brown coal and lignite and 27 to 28 million tons of bituminous coal will have to be mined in 1985.

In power engineering, overall production of electricity in 1985 will have to reach 80 to 83 billion kilowatt hours, 15 billion of them in nuclear power plants.

Streamline the operations of power and heating plants. By 1985 attain a consumption rate of 373 gmp [grams of standard fuel] for generation of 1 kilowatt hour in public utility steam power stations.

Promote integration of Czechoslovak electrification system with the systems of CEMA member countries. Provide for Czechoslovak participation in construction of the Khmel'nitsa nuclear power plant on the territory of the USSR.

In the metallurgical industry and consumption of metals, start with essentially maintaining the attained level of production of metals. For that reason, all sectors of the economy must substantially improve their economic use of metals to the point that their relative savings during the course of the Seventh Five-Year Plan amount to an annual average of 4.5 to 5 percent.

In steel production, orient the development toward expansion of modern economic technologies which make better use of input materials and facilitate an even rate of production and improvements in its quality. Continue developing production in oxygen converters, introducing continuous casting and out-of-furnace refining of steel and intensification of electric-powered steel plants.

In the production of rolled materials, improve the assortment structure by increasing the production of medium and precision profiles, profiles for more economic structures, annealed thick sheetmetals and isotropic dynamo sheets. Substantially improve the assortment of exported rolled stock, particularly by elimination of products with the lowest degree of processing and low-grade material.

To attain a high degree of utilization of nonferrous metals in the metallurgical cycle, introduce continuous processes in the manufacture of semifinished products, make use of refining processes and new methods of melting to achieve high quality and a decrease in the consumption of metals.

The machining and electrotechnical sectors will continue to form the base for the development of Czechoslovak economy. Production in the machine industry and electronics must increase 33 to 35 percent with an increase in labor productivity on the order of 30 to 32 percent.

Development of production in the machine and electrotechnical industries must primarily strive to meet its export tasks in the requisite amount and the required structure.

In the heavy machinery industry, meet export obligations ensuing from long-term trade agreements with socialist countries and make more inroads into the markets of nonsocialist countries, particularly by exportation of complete industrial plants.

Orient the development of general engineering toward enhancing the Czechoslovak needs for exports with improved product quality. At the same time meet domestic demand by delivering progressive technologies and innovative products of machined consumer goods.

In the electrotechnical industry, accelerate the development of production capacities with maximum utilization of the research and development potential and cooperation with socialist countries. By a production increase of 45 to 50 percent, create the prerequisites for electronization of the national economy. By



giving priority to the development of electronics in general and of microelectronics in particular, systematically improve the utility value of products and technologies in key sectors and branches of the national economy and, thus, accelerate the growth of productivity of labor and lower consumption of energy and materials. A key task of the electrotechnical industry is to create conditions for improving the export capabilities of machinery and other products and to curb the demand for their imports. This will call for a much wider use of the international division of labor, particularly for cooperation in the framework of socialist economic integration.

Long-term orientation of the chemical industry should focus on a substantially improved utilization of raw-material and energy inputs by accelerated growth of technically and technologically demanding production processes with a high share of highly qualified labor, with the objective of eliminating their importation and increasing their applications for exports in the international division of labor and integration with CEMA countries, particularly with the USSR. In regard to nonsocialist countries, structure production and consumption in such a manner as to obtain substantial improvements for this sector in the area of foreign trade. The overall volume of production by the chemical industry must be increased a minimum of 12 percent by 1985.

In the woodworking industry, make more effective use of all wood, to include reusable waste and brush, to improve production by more than a quarter. To achieve this, make better use of the new capacity built during the fifth and sixth five-year plans. At the same time, increase production of unbleached pulp by more than 60 percent, particle board by 65 to 70 percent and pressed fiber board by 15 percent.

Concentrate the development of light industry on improving the quality and technical level of products, more intensive innovation of the assortment of products and enhancing the market with novelties and luxury products. In relation to foreign trade, adjust the product assortment so as to increase in exports the share of products that clearly valorize the national product in keeping with the development of costs for imported raw materials. By 1985, provide for a production increase in light industry of approximately 15 percent.

By developing the production of construction materials, meet the needs of the national economy in assortment composition and orient it toward achieving maximum economy in the consumption of fuels and energy. Give preference primarily to production of materials and products that demand little energy, fuel and metal and which have higher thermal insulation properties that save energy even after the structure is used.

In agricultural production, continue intensification in individual production sectors with priority on increased plant production. Make improvements in distribution of agricultural production in keeping with optimum utilization of natural conditions and promote specialization and concentration of products.

In the course of the Seventh Five-Year Plan, attain an increase in agricultural production of approximately 10 percent as compared to the Sixth Five-Year Plan, 14-16 percent of which should accrue to plant production.

Provide for an average annual harvest of cereals on the order of 11 million tons and thus attain an approximately 9 percent increase in their production during the five-year plan in comparison to the Sixth Five-Year Plan.

Step up the production of bulk fodder to produce a 13-14 percent increase in comparison to the Sixth Five-Year Plan. In addition provide an adequate amount of quality seeds and fodder grass.

In order to provide a raw-material base for the processing industry and enhance foreign trade relations, achieve continuous growth and improved quality of industrial produce production. Increase production and purchase of oleaginous produce by more than half in comparison to the Sixth Five-Year Plan. In the case of sugar beet, overcome stagnation in production and in sugar contents; to that end, implement effective measures and increase production by 12-15 percent as compared to the Sixth Five-Year Plan. In the case of hops, increase production by one-fifth.

Develop the structure of animal production in conformance with actually available sources of feed and fodder and implement increases in production primarily by breeding of horned cattle while improving utility of the animals. Develop productions requiring large amounts of kernel feed only to the extent that they can be procured. To lower the demand for kernel feed, produce quality mixtures. Implement the adopted protein program. Gradually implement the program for biochemization of animal production.

Increase production in the food industry 10-11 percent by 1985 and deliveries for consumer goods inventory by roughly 12 percent.

In developing the national industrial base of the agroalimentary complex, in addition to increasing the volume of deliveries, also improve their technical level. As a backing for agricultural production, increase deliveries of industrial fertilizers 8-10 percent and deliveries of calcareous substances and protective chemical and biochemical agents for plant and animal production. Make substantially better use of manure fertilizers than has been the case.

In capital investment, keep the volume of resources approximately at the level of the Sixth Five-Year Plan. Continue intensive laying out of irrigation systems and start additional drainage projects.

To improve the level of technical equipment of agriculture, in the course of the Seventh Five-Year Plan supply 10,000 trucks modified for specific purposes, 6,500 power loaders, 35,000 tractors and increase deliveries of equipment for soil cultivation and sowing. Provide other necessities, particularly spare parts and packaging materials. Develop and improve servicing of agricultural equipment.

In forestry, create the prerequisites and conditions for continued growth of the productive capacity of forests, to include other forest functions. Increase care of young forest growth and improve resistance of forests against natural calamities.

In compliance with the productive capacity of forests, increase felling in the Seventh Five-Year Plan to approximately 92 million cubic meters, i.e., 3.7 percent

more than in the Sixth Five-Year Plan and deliver approximately 67 million cubic meters of lumber.

In the sector of water management, meet the demand for water to supply the populace, agriculture and industry by developing both surface and subterranean sources. Implement antiflood measures on exposed streams, particularly in the southern region of Moravia, on the Odra, Morav, Jp1 and Siana rivers. In keeping with the agreement and in cooperation with Hungary, continue construction of water projects on the Danube River. Continue with implementation of water management measures in the North Bohemian lignite basin and implement water-management investment projects relevant to the development of the fuel and energy base.

Orient development of production in the construction industry to completion of projects, shortening of completion deadlines and expedient launching of operations in completed facilities. Seek to gradually alleviate the dissipation of capacities and promote concentration of production in the construction industry by systematically controlling the number of projects being launched to be in harmony with the planned investment construction. At the same time, orient the technology of construction operations toward effective utilization of materials from domestic sources.

Concentrate construction capacities on key projects and into the area of concentrated investment construction of the capital city of Prague, the north Bohemian region and the capital of the SSR, Bratislava.

The key task of the transportation system is expedient, continuous, qualitative and efficient meeting of transportation needs of the national economy and the populace. Transportation of goods should increase 7-9 percent, with emphasis on the role of railroad transportation.

Achieve a minimal 5 percent reduction in transportation demand for the national product primarily by streamlining measures in the sector of carriers who must lower production demands on material, eliminate ineffective cooperation and specialization affiliations and wasteful transportation of goods in the return direction, accelerate loading and unloading operations and meet transportation demands according to a better balanced schedule.

In telecommunications, focus efforts on improving and increasing the level of services for the populace and socialist organizations. Gradually improve promptness of communications by modernization of equipment, improved maintenance and accelerated repair of communication installations and networks.

Continued successful development of the Czechoslovak economy and growth of its effectiveness calls for increased active participation of the CSSR in the international division of labor and, particularly, in socialist economic integration. The basic task is accelerated reinforcement of an effective export capability of the Czechoslovak economy and systematically providing a higher lead in the rate of growth of exports ahead of imports. This priority task must be implemented at all levels of management of the national economy.

An all-round economic and technoscientific cooperation with the socialist countries, particularly the USSR, must continue to be the basis of further development of Czechoslovak external economic relations. Maintenance of close ties between the Czechoslovak economy and the economy of the USSR and its technoscientific and production potential is the main guarantee of a stable and dynamic economic development of the CSSR.

In relation to the socialist countries, create conditions for increasing the turnover in mutual exchange of goods in the course of the Seventh Five-Year Plan by more than 25 percent (in physical representation). With a view to the growing demand on the markets of socialist countries, systematically improve technical and economic parameters, technical servicing, services and quality of products.

In relation to developing countries, continue to promote all-round cooperation toward developing the production potential of these countries. At the same time, make continued efforts to develop forms of cooperation which would make it possible to bilaterally benefit from the international division of labor.

In relation to the advanced capitalist countries, create the prerequisites for an improved structure of mutual exchange of goods, mainly by strengthening the role of machinery and instrumentation in Czechoslovak exports. Deliberately orient imports to procurement of indispensable raw and other materials, but particularly to acquisition of products of a high technical level which would help make Czechoslovak production more efficient and boost its export capabilities.

The demands posed by future development of the economy require that the capital investment program for the years 1981-1985 provide only for the most pressing needs in development of the national economy with maximum effectiveness.

With respect to potential accumulation and use of national income, the annual volume of investments should not be increased in the course of the Seventh Five-Year Plan.

Achieve a reversal in the manner of replacement of long-term assets by placing main emphasis on better utilization of existing facilities, improved effectiveness of investments and implementation of the results of technoscientific development. This calls for improving the ratio of investments for renovation and modernization to investments for developmental projects while systematically maintaining harmony between reproduction of capital assets and manpower.

Concentrate operations and deliveries of all participants for accelerated completion of projects under construction, particularly obligatory tasks, provide for early launching of completed fixed assets and production capacities into operation and lower the number of units under simultaneous construction. Through achieving a categorical reduction in the number of simultaneously constructed units, create the prerequisites for gradual cutting down of construction deadlines.

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HIGHER CONSTRUCTION PRICES RESULT IN LOWERED EXPENDITURES

East Berlin BAUZEITUNG in German Vol 35, No 3, Mar 81 pp 134-136

[Article by Prof Dr Rudolf Waterstradt, Leipzig Technical College, and Manfred Hering, economist, VEB Construction Combine, Leipzig: "New Construction Prices Promote Lowering of Specific Construction Costs"]

[Text] Whenever the basic assumption is that the construction price as an objective economic category is a monetary expression of the value of an appropriate structure, we must be sufficiently aware of the fact that the construction price cannot always be absolutely adequate for this measure of value because:

--the socially necessary labor costs--and thus the value as the substance of the price--continually change because of various influences and as a rule this change is recognized only as a trend at the time of price setting, and on the other hand,

--the construction price as a plan price cannot react as continually to such changes, but rather can only be corrected as a function of specific plan period segments.

From this it follows conclusively that construction price shaping must be qualified at specific time intervals by taking into consideration the pertinent non-economic dimension as well as the economic dimension described here.

Thus, when viewed historically, the construction prices in effect since 1 January 1980 are the result of:

--the period of construction price formation in the postwar years between 1945 and 1955,

--the period of fixed price formation between 1956 and 1966, and

--the period of the formation of construction prices as a result of the industrial price reform of 1 January 1967.



What is the Nature of the Source of the New Quality of Current Construction Prices?

The industrial sales prices (IAP--in the following called "construction prices") for buildings and construction-based facilities are bindingly regulated by price law (Pr) order (AO) No 211--prices for new construction from 31 January 1978 on. In line with one sphere of application set forth in the above-mentioned AO, the price categories (a term which is to be understood as a further subclassification of the type of price) listed below are specified in the individual price lists of Pr AO No 211 with a clearly defined ranking in respect to their use:

- prices for utility value units
- comparable prices for units of utilization (also price indexes for them)
- prices for structure parts
- prices for comprehensive performances
- prices for partial performances (partial prices).

In ascertaining the construction price of a structure as the final product and of a housing complex as the end product (final product and end product are used here synonymously) in the complex relationship of the scope of supply and performance of a general contractor (subsequently: contractor) in the process of investment preparation for complex housing construction, in general the principles of price in the price list--General Regulations of Pr AO No 211--are to be used in connection with the applicable legal norms (1, 2, 3).

Thus, the systematic industrial price change was necessary in the construction industry in order to again correctly reflect the socially necessary costs of objectified labor and human labor expressed in wages and also the socially necessary net income rate and in this way at the same time to objectify the performance evaluation of the construction enterprise; this ultimately means activating anew the measuring and distribution function of the construction price.

Moreover, with the construction prices in effect since 1 January 1980 a real basis was established for purposeful work with price forming factors. At the same time, there was better correlation than before with the relationships between construction price and the development of efficiency--as is known, the essential lines of activity intersect in the price. Since new construction prices are based, among other things, on

- the constant changes in the level of costs for basic materials,
- the progressing normative provisions of production costs in respect to consumption and use, and
- the differentiated, economically based normative provisions for profit,

they have a lasting impact on increasing their stimulating function, beyond the measuring and distribution function.

In particular, they take into account the general objectives in respect to qualifying cost work and thus lowering specific construction costs. The latter is favored in particular by the fact that with the price categories in effect since

1 January 1980 the share of product- and utility value-based construction prices, respectively, has risen substantially. At present, in housing construction the greater general impact of the price categories named reaches a range of application of about 90 percent and in reference to the overall sphere of the Ministry of Construction, is substantiated with a share of about 60 percent. In addition to a purposeful reduction of specific construction costs, among other things, this situation promotes:

--performance assessment in terms of utility values, including cost ratio differentiated according to utility values,

--product-related planning, accounting and analysis of the production process of the construction enterprise, and

--enterprise and performance comparisons and especially comparison of cost units, international comparisons, backlog comparisons, among many others.

The stronger pressure of such construction prices on lowering specific construction costs is the basis of the interest in the individual cost segments which are presented in Figure 1--simplified for reasons of method!



Figure 1. Content of Construction Prices According to Pr AO No 211

Key:

1. Costs regulated by the construction price law and thus accepted by society as necessary
2. Socially necessary costs
3. Additional socially acknowledged costs
4. As ultimate share of price
5. As temporary share of price
6. Construction price = highest price, according to Pr AO No 211

This shows that in addition to the share which is to be characterized as socially necessary costs, the construction prices contain another certain additional cost, which for the present is still socially recognized; both taken together determine the construction prices as the highest price.

More fundamentally than ever this state of affairs produces the logical results relating to a systematic reduction of first costs and hence a lowering of specific construction costs.

#### Consequences for Lowering Specific Construction Costs

The most important manifestation of specific construction costs are the first costs; they are the monetary expression of the running costs which develop in connection with the production of a structure, in respect to embodied labor and human labor expressed in wages.

In this matter the differentiation between socially necessary first costs; enterprise-essential first costs; and the individual enterprise's first costs is structured around the following features:

The socially necessary first costs reflect the planned, socially average specific construction costs which society is prepared to accept as necessary and which, therefore, in addition to the socially necessary net income, are compensated for via the construction price.

The enterprise-essential first costs form the basis of the socially necessary first costs, that is, they are the elements of the formation of the average. They extend to first costs which can be calculated and take into account the necessary reduction in first costs which is fixed, on a priority basis, by the section of the plan for science and technology. Consequently, enterprise-essential first costs are being observed if the following are employed:

- purposeful concentration of construction production,
- efficient utilization of the productive assets,
- a high material economy,
- good organization of the use of the labor force, and
- a technology favorable in terms of enterprise management, which proves its worth in a construction period that is favorable in terms of enterprise management.

The enterprise-essential first costs, thus, are based on a systematic development of the enterprise reproduction process.

The enterprise-essential first costs are not being observed if there is deviation from the factors mentioned.

Such deviations take into account the individual enterprise's first costs. Thus, these include all kinds of costs which cannot be planned as well as all nonplanned cost developments, and thus show how far removed from the socially necessary first costs the individual construction enterprise is.

Figure 2 illustrates this relationship:

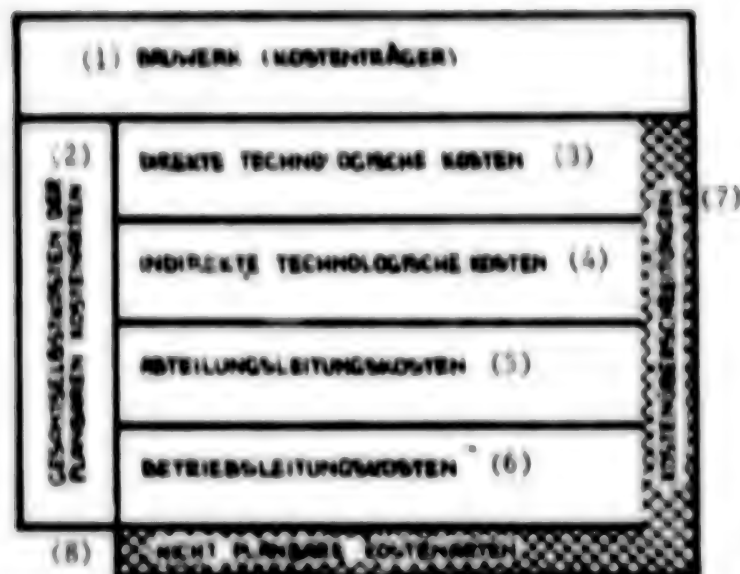


Figure 2. Relationship of Enterprise-Essential and Individual Enterprise's First Costs

Key:

- |  |  |
|--|--|
| 1. Building (cost units)                                 | 5. Department management costs           |
| 2. Overall first costs of cost types that can be planned | 6. Enterprise management costs           |
| 3. Direct technological costs                            | 7. Cost overruns                         |
| 4. Indirect technological costs                          | 8. Types of costs that cannot be planned |

The individual enterprise's and the actual first costs, respectively, reflect to what extent there has been success in conforming to the social requirements and in realizing the socially necessary rate of profit. At the same time, this also proves whether it was possible to accommodate the general demand for intensified pressure of the construction price via reducing first costs on the lowering of the specific construction costs.

Since the construction price, in addition to the socially necessary first costs, contains a socially necessary profit rate, there are effects on the profit of the construction enterprise which depend on the kind and magnitude of the deviations of the first costs of the individual enterprise's and the actual first costs, respectively, from the socially necessary ones. Consequently, how is the construction enterprise supposed to successfully pursue maximizing of profits, which it requires, if it does not bring under control a systematic reduction in specific construction costs by means of first costs and the reduction of first costs?

Product- and technology-based ascertaining of plan first costs by calculating plan first costs is especially suited to clearing up backlogs that occur. This makes it possible to limit cost demands in such a way that limitation of specific construction costs is thus achieved. All this with consideration of the product- and complex-based specifics of location and other specific conditions, such as:

- the natural conditions, for example, initial conditions,
- the anthropogenic conditions, like city technology and space requirements,
- the diversity of the various buildings and the special features of construction production.

#### Calculating Plan First Costs Brings Specific Construction Costs Under Control

Calculating plan first costs means the computation methods for determining the product-related, technology-based plan first costs. In turn, plan first costs are the monetary expression of the anticipated planned consumption of objectified labor and human labor expressed in wages with consideration of the specific conditions already explained and of the special features of construction production.

If in the past it was important to calculate the anticipated plant first costs in respect to the product, the importance of calculating plan first costs is rising substantially because of the greater share of more highly aggregated price categories, especially because of the more extensive utilization of construction prices based on product and utility value. For, after all, it has been extensively established that these quite clearly recognize the relevant enterprise technological conditions only in part--namely as an influence on the formation of the average--and in no way do they take into consideration the individual enterprise's technological conditions.

However, on the basis of the necessity to be able to judge, prior to starting construction, the efficiency of producing the individual structure and of the possibility to strive for higher efficiency, the development of calculating plan first costs becomes indispensable in the future. It provides those persons employed in the building trade with the tool for figuring in advance the specific construction costs, for selecting that technological variant, by comparing variants, which provides the lowest specific construction costs and controls the planned consumption of the specific construction costs.

In the process it takes advantage of the finding that every function curve of product-related plan first costs, which is dependent on construction time, and of the actually occurring first costs has a saddle point. Proceeding on that basis, the construction enterprise calculates this point, using the calculation of the plan first costs, taking into account the technological choice of variants, and thus makes the construction time, which is favorable in terms of enterprise management ( $t_{pp}$ )--which represent an operational technology which is favorable in terms of enterprise management--into the basis for executing construction. As a result, it is significant that the technical and technological solutions, which as a rule are designed in advance, are not passively reflected only in an economic solution in general and in an appropriate calculation of plan first costs in particular, but rather that with the calculation of plan first costs there is an active reaction to the technical one, and very specifically to the technological one. This is urgently necessary and even decisive as long as our construction times on the construction time axis ( $t_B$ ) in part are substantially far to the right of a construction time that is acceptable in terms of enterprise



management, all of which quite rightly motivates the demand to shorten present construction times by 30 percent and in some cases by 50 percent. (4)

Compare this with Figure 3!

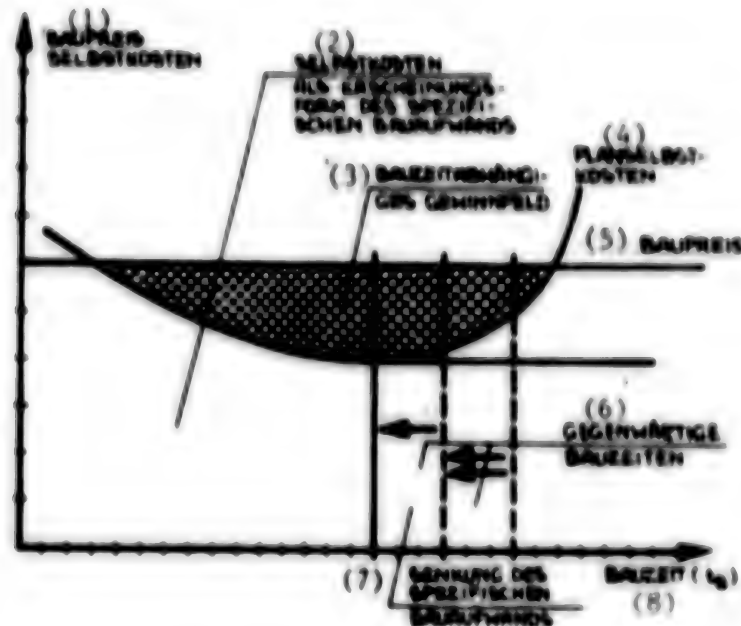


Figure 3. Reduction of Specific Construction Costs by Calculating Plan First Costs

Key:

- |  |   |
|--|---|
| 1. Construction price first costs                                | 5. Construction price                       |
| 2. First costs as a manifestation of specific construction costs | 6. Current construction times               |
| 3. Profit area dependent on construction time                    | 7. Reduction in specific construction costs |
| 4. Plan first costs  | 8. Construction time ( $t_B$ )              |

By taking into account additional economic value and appropriate price supplements and involvement in use by the construction enterprise, respectively, the construction time which is favorable in terms of enterprise management can be shortened to an economically favorable ( $t_{BV}$ ), call it: optimal construction time by the fact that calculating plan first costs as the normal calculation-- $t_{BB}$  corresponding to  $t_{BV}$ --is qualified into an optimal calculation--justifying the optimal construction time.

The most important monetary expression of the reduction of specific construction costs is the reduction of first costs which is demonstrated in a product-based manner by calculating plan first costs and which is composed of an absolute and a relative reduction in first costs.

in this, any absolute reduction in first costs has its roots in the section of the plan for science and technology and as a result requires measures and topics concerning the direct saving in costs of objectified labor and human labor expressed in wages. Every relative reduction in first costs on the other hand is justified in the cost dynamics as the value from the behavior of the fixed and degressive costs, given an increase in production (N).

$$N = (P_1/P_0 - 1) (f_0 + d_0 K_d - p_0 K_p)$$

$P_1$  production in the report and plan period, respectively

$P_0$  production in the base period

$f_0$  fixed costs in the base period

$d_0$  degressive costs in the base period

$K_d$  degree of degression

$1 > K_d > 0$ ;

0 = proportional costs

1 = constant costs

$p_0$  progressive costs in the base period

$K_p$  degree of progression

$K_p > 0$ ;

0 = proportional costs

Both sources need to be very expertly controlled and fully utilized in the interest of systematic reduction of specific construction costs.

Thus, Construction Practice Is Well Advised

If it

--concentrates its efforts on preparing calculations of plan first costs more consistently than in the past, thus with the intention of bringing the specific construction costs under control and organizing, by means of systematic optimizing of utility value--costs and construction time--costs, a marked reduction in specific construction costs, and

--on controlling the interplay of the section of the plan for science and technology in general and special research and the innovators movement in particular, especially by means of specific construction costs using the calculation of plan first costs in a way that guarantees a reduction in specific construction costs via lowering first costs.

The desired results, that is, the timely and short-term establishment, respectively, of the utility values with low cost ratios as an expression of low specific construction deserve to be the focus of performance evaluation and to receive appropriate economic stimulation.

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12124

CSO: 2300/189

GERMAN DEMOCRATIC REPUBLIC

CROP, WEATHER REPORT PUBLISHED FOR FEBRUARY 1981

East Berlin FELDWIRTSCHAFT in German Vol 22 No 4, Apr 81 p 180

[Article by Dr D. Krumbiegel, GDR Meteorological Service, Central Weather Bureau, Potsdam]

[Text] The Weather in February 1981

The first 10-day period was much too mild, the second, normal in temperature, the third, too cold. There was frequent precipitation, but only in the first 10-day period was it abundant. Except for the month's end, there was little sunshine.

After average daytime temperatures had mostly been above normal, by from 3 to 6 and partly from 5 to 8 K, temperatures dropped, more strongly so in the southern than in the northern GDR. Starting with the end of the second 10-day period, air temperatures most of the time ranged from 3 to 5 K below normal. Daytime maxima, initially and at the end of the first 10-day period, ranged between 4 and 8 °C, rising locally up to 10 °C. Starting on the 11th, maxima ranged around freezing and dropped, widespread, below freezing between the 18th and 23rd. There were a few nights in the first 10-day period that remained even without ground frosts, generally or regionally. Ground minima subsequently dropped only for a few nights below -5 °C in the northern GDR, in the southern, frequently to between -5 and -10, partly to -15 °C. The precipitation in the first 10-day period was mainly rain. The highest daily volumes, with values around 5 mm, were recorded on the third (northern part) and on the sixth. In the second and third 10-day periods, the precipitation mainly was snow. Starting with the 25th, the whole area remained virtually without precipitation. The snow cover at the start of the month in the southern part melted in the plains during the first 5-day period, in the hills, up to the eighth. Starting on the 11th, another snow cover began to form in the whole area, but that was not cohesive everywhere. Mostly the snow was less than 5 cm deep, regionally, between 5 and 10cm. Values up to 180 cm were recorded in the mountains. By the end of the month, large areas, mainly in the northern part, were free of snow.

Temperature Data for February 1981 according to the Chief Climatological Office, Potsdam

1. Average Monthly Air Temperatures and Deviations from Normal Values

Swerin	0.8°C	+0.5K	Erfurt	-1.2°C	-1.0K
Neubrandenburg	0.2°C	+0.6K	Leipzig	0.1°C	-0.1K
Potsdam	0.4°C	+0.3K	Goerlitz	-0.5°C	+0.2K

2. Average Precipitation according to Bezirke

Rostock	32 mm = 96%	Halle	20 mm = 65%
Schwerin	33 mm = 87%	Erfurt	24 mm = 60%
Neubrandenburg	21 mm = 64%	Gera	26 mm = 79%
Potsdam	24 mm = 75%	Suhl	24 mm = 47%
Frankfurt	20 mm = 65%	Dresden	27 mm = 64%
Cottbus	21 mm = 64%	Leipzig	26 mm = 76%
Magdeburg	23 mm = 70%	Karl-Marx-Stadt	26 mm = 53%

The average temperature of the three winter months (December 1980 to February 1981) in the GDR plains came to values between 0.6 °C (Schwerin) and -1.2 °C (Erfurt). That means the winter of 1980/1981 in the northern part was by from 0.2 to 0.4 K warmed than the longtime average and colder in the southern part by from 0.2 to 1.1 K. Cold totals (sum of negative daytime averages of air temperature) came to from 100 to 130 °C in the northern bezirke and in Magdeburg Bezirk, to from 130 to 200 °C in the rest of the plains and hill country, and to from 200 to 360 °C in the mountains. Thus the 1980/1981 winter may be classified as moderately warm widespread but in the hills, where cold totals at times went beyond 200 °C, as moderately cold. Precipitation volumes in the period from November 1980 to February 1981 were 15% percent above normal in Gera Bezirk and from 5% to 10% above normal in the bezirke of Rostock, Schwerin, Neubrandenburg, Erfurt and Leipzig. The bezirke of Suhl and Karl-Marx-Stadt got 85 and 90% respectively, all others from 95 to 100% of the average precipitation volume.

Soil, Crop and Labor

Surface soil temperatures in the second 5-day period temporarily rose to values around 5 °C. Then the ground cooled off fast, which also affected the subsoil. In the surface soil temperatures stayed around freezing. By the end of the month, 1 to 2 °C were recorded at a 50-cm depth, 2 to 3 °C, at a 100-cm depth. In the course of the first 10-day period, frost vanished from the ground, starting in the north. Starting with the 11th, frosts generally repenetrated the ground. First, frost penetration depths ranged between 5 and 10 cm. They increased in the third 10-day period so as to reach from 10 to 20 cm by the end of the month and, with from 25 to 40 cm locally, their highest values. Intermittent frosts in the upper surface area in the second and third 10-day periods were relatively small in number. They are not likely to have much improved the structures. The precipitation in the first 10-day period raised the ground water level slightly. Values lay generally around field capacity. Then the ground water level sank in the 50-cm stratum by from 5 to 15 mm. These were values recorded below turf. They may have been higher on acreages that were free of snow.



The mild weather in the first 10-day period temporarily stirred vegetation up, but then vegetation came to rest again completely. Winter crops were adequately protected from frosts by the snow cover. Temperature minima recorded below the snow only for a few days dropped below  $-3^{\circ}\text{C}$  locally. No frost damage is likely to have occurred even in areas temporarily without snow because temperature minima did not drop below critical values. The winter seeds did sustain some stress from the strong temperature contrasts between night and day by the end of the month. At the same time these conditions induced some degree of vegetation. Snowdrop started flowering on the 25th at favored sites.

Some plowing was possible, but only through greatly increased traction power. Some field work was carried out under frost conditions in the second 10-day period (in Thuringia). As, starting with the 11th, ground frosts facilitated trafficability, fertilization measures were carried out. When there was ample sunshine by the end of the month, grounds superficially softened for a few hours and thus were no longer trafficable. Aeration conditions were rather good, at least on an hourly basis, in the large storage acreages and silos almost every day. Except between the 18th and 23rd, when daytime maxima below freezing admitted no fresh air. Fruit tree cultivation was hardly hampered by the weather.

#### Meteorological Projections for Farming in April 1981

Initial soil climatic conditions are much like those of last year, so that the experiences gained in 1980 ought to be drawn on. As the subsoil has no longer any heat reserves, we must expect the soil to warm up but slowly, due to the high water level. At the same time there is the likelihood of temperature reversals in cool weather periods. Soil climatic processes will get started slowly. We must expect a heightened sensitivity to pressure due to the crowding on the acreages caused by the precipitation, the high ground water level and the negligible frost effects. Even rain that is not very abundant may for the same reasons interfere with field work. There is a high risk of runoff losses, water erosion, mudding and subsequent incrustation.

5885

CSO: 2300/212

## LABOR MINISTER DISCUSSES ADOPTION OF FIVE-DAY WORK WEEK

Budapest NEPSZAVA in Hungarian 25 Apr 81 p 1

[Text] Ferenc Trethon, labor minister, gave a press conference in the Parliament's Gobelin Room last Friday, about the introduction of the 5-day work week and related modifications in the working hours. Zsolt Rajnok, state secretary, president of the Bureau of Information, was also present.

In his introduction the minister recalled that transition to the 5-day work week was first formulated in the program resolution of the MSZMP's 12th congress. Following this, the Council of Ministers' 1978 February decree concerning employment and the tasks of improving manpower policies prescribed: "It should be explored how without reduction in the present legal working time, under what circumstances and conditions transition to the 5-day work week may begin; and how the work hour reduction may be tied to the need for the forceful increase in productivity and efficiency." With all these, Ferenc Trethon referred to the fact that analysis and investigation began already during the period of the fifth five-year plan, and that the resolution of the MSZMP's 12th congress concerning the introduction of the shortened work week took the results of these into consideration. The Council of Ministers' decree implementing the law on the sixth five-year plan specified that the gradual transition to the 5-day work week should commence on 1 January 1982.

The preliminary work was more complex and detailed than usual, considering the great sociopolitical significance of the 5-day work week. The principles concerning the transition were finalized only after extensive exchanges of opinion with the central directing and social organizations; with several producing and service enterprises.

In general, transition to the 5-day work week is possible beginning 1 January 1982. Enterprises, however, working in three or more shifts, and where 51 percent of the physical labor force is deployed in these shifts may begin the implementation of the 5-day work week beginning 1 July 1981. By the end of the first half of 1982, the 5-day work week should become prevalent. Exemptions will be education (where transition will take place during the 1982/83 school year); agriculture; and organizations which could not accomplish the transition from their own resources.

With the introduction of the 5-day work week employees working in one shift will have a 42 hour, and those working in more shifts and under a nonstop work schedule, a 40-42 hour work week, the minister specified. Within the prescribed limits, and taking their economic possibilities into account, economic units will independently determine their own working hours. Lunch break will not be a part of the legal working time in the future. The current system of vacation will remain unchanged.

The introduction of the 5-day work week is possible if the enterprise and individual employee incomes are not reduced, and the economic-financial status of the enterprise in question does not deteriorate as a consequence.

Ferenc Trethon pointed out that not counting vacation time and sick leaves, the level of daily absenteeism, justified or unjustified, is about 3-5 percent. For those who are present, a further 10-15 percent loss ensues from managerial, work organizational errors and from the lack of discipline.

The government expects favorable economic results from the transition to the 5-day work week. It is conceivable that by identifying unutilized resources and sources of losses, the reduction of work time will not only be compensated but beyond that gains in efficiency will be realized.

In cooperation with union locals, economic units should work out programs which correspond to their own specificities. These programs should incorporate measures designed to balance the diminution of the working time; to insure the continuity of commodity transportation; and they should contain work schedules and provisions related to performance and compensation. Such a program, similar to a collective contract, should be discussed with employees. In choosing a work schedule, attention should be paid to both enterprise and individual interests, emphasized the minister, then once again reminded [his audience] that the 5-day work week will significantly improve the living conditions of the populace, it will increase leisure since in one-third of the year employees will not be at their work places. The successful implementation of this measure demands the cooperative, continuous directing and controlling work of economic, social organizations and of local councils.

CSO: 2500/236

# TRANSPORT ENTERPRISES MAIN TASKS IN 1981 EXAMINED

Budapest KOZLEKEDESI KOZLONY in Hungarian No 12, 22 Mar 81 pp 198-201

[Article by Maria Gorgenyi: "The Main Tasks of the Transport Enterprises in 1981"]

[Text] The main task of economic work in 1981 is to improve the balance situation of the national economy. This goal must take precedence over the organization and increase in production and in domestic consumption. Since any real possibilities of reducing domestic consumption have disappeared for the most part, the main source of improvement in the balance situation in the future may be an increase in the efficiency of social production and a change in the production organization meeting contemporary demands for a faster tempo. An increase in production efficiency, given more vigorous and serious attention than in the past, is not only necessary in the interests of improving the balance relations, but also we have come to the level of production where sources of extensive development are no longer at our disposal. Much more efficient work is also necessary because at present only through competitive production can our position be maintained and advanced in the world economy. Nowadays efficient work is an indispensable criterion of competitiveness.

The first year of our new medium-range plan is 1981, and therefore the resolution of the 12th MSZMP Congress, referring to the organizational work of the Sixth Five-Year Plan period, could not be left out of consideration when the annual plan was elaborated.

The congress unambiguously decreed demands levied on transport and communication media. According to these:

- The various subbranches must be developed in harmony;
- The role of the railroads must be increased in long-distance freight and passenger transport;
- The division of labor in freight shipment must be improved, to be resolved by significant savings in fuel;
- Another task emphasized is modernization of the railroads and highway development, while better exploitation of water transport must be aimed at;

--Mass transport must enjoy priority in passenger transport, and there must be a continuation of network expansion in the large cities and subway construction in the capital; and

--The communications media must be modernized and postal services must be improved.

These expectations are also in harmony with the objectives of the transport policy.

For this reason our enterprises had to fix their 1981 goals with a knowledge of these objectives and expectations.

The fact that 1981 is the initial year of a new 5-year plan period levied increased responsibility on the management organizations when they set their objectives. It was also uncommon, from the viewpoint of further development, for the enterprises to establish their work and capabilities for the succeeding years. At the same time this created a favorable situation, since, in connection with developing their operations for the 5-year period, they were able to finish calculations to determine their 1981 budgets much earlier than usual.

The 1981 plan itself was elaborated in accord with the practice of previous years. At a party conference in June the economic managers of the enterprises were given guidance on the transport and media plans for 1981, and for the Sixth Five-Year Plan period, and publication of methodological guidelines and a summary of requirements for the management organizations preceded actual work.

After the publication of the 1981 economic plan guidelines, the enterprises were able to begin their planning work in September 1980, and in early December they had prepared their plan proposals, which the responsible administrators of the management organizations approved by the end of January in the definitive form following discussions conducted during plan consultations.

It must still be noted in connection with the course of the planning work that there were factors last year which interfered with the smooth conduct of the work of plan preparation, although not to the same degree as in 1980. What were these factors?

Further general development of the economic regulating system began on 1 January 1980. The establishment of harmony among the economic plan objectives of the Sixth Five-Year Plan and the regulating system primarily rendered the corrections becoming effective in 1981 necessary. This meant a change in some regulating elements or in their extent, but there was no comprehensive modification as in the past. The corrections were of a decidedly general nature, and became recognized for the most part at the beginning of the planning work. However, in some cases the actual extent of change was officially communicated earlier, thus preparing the enterprises for a rate of work revised upward.

For example, the plan proposals were being prepared at a time when modifications in domestic production prices for 1981, import prices set in international contracts, and the degree of change in the rate of exchange were still unknown, or known only in planned drafts.



The lack of knowledge of the extent and timing of price changes to be expected and uncertainty demonstrated in the conduct of shippers were also perceived in the plan proposals. It follows from this that, for the sake of efficient assistance in enterprise planning work, the main departments of the ministry in the future should be first to assist in preparing and publishing the central figures through active collaboration and development of them, and secondly to set a realistic time limit for the plan preparation period.

Next let us examine what expectations the national economy has levied on the transport enterprises.

Shipping requirements accompanying socioeconomic development and constantly widening international contacts, and increasing at a more moderate rate than in the past, must be met by increasing security and by maintaining the quality level already achieved.

In comparison with the previous year, the calculation data of the national economic plan estimated a slightly less than 2 percent increase in passenger transport performance. It can be found by comparing long-distance and local mass transport that the rate of increase, which is affected by the more than 5 percent increase in rural mass transport, is more dynamic than local mass transport performance.

In contrast to the national economy estimate of 42,400 million passenger kilometers, the transport enterprises expect to attain 42,556 million passenger kilometers. The slight difference is a result of the fact that MAV (Hungarian State Railways) is counting on more round trips for passengers on the railways in long-distance traffic than the central estimate because of ever increasing energy costs. In order to reach this figure they want to make greater efforts to improve the quality of passenger transport. Among other things, in accord with the trend toward increasing numbers of passengers on fast trains, they are expanding the network of express and fast trains, increasing the frequency of traffic in the vicinity of provincial cities, and are lengthening trains in accord with passenger traffic needs.

In comparison with previous years the VOLAN Trust expects passenger needs to increase at a more moderate rate. Since the increase in passenger kilometers is expected to be greater than the average increase in automobile ownership, the enterprises must assure fulfillment of the needs by improving organizational arrangements, at least on the level reached up to now.

In air traffic MALEV (Hungarian Air Transport Enterprise) has estimated completion of 1,111 million passenger kilometers on last year's lines, which means an increase of 4 percent in performance. As a result of marketing activity, the enterprise has reached the conclusion that the number of passengers will decline in the next few years, and that vigorous commercial work is necessary to be able to at least moderate this trend.

The passenger transport activity of MAHART (Hungarian Shipping Company, Limited) in 1981 will primarily meet tour and recreational demands. In view of the foreign tourist traffic experienced in recent years, plans are based on

71.5 million passenger kilometers, which means a 2.6 percent increase in comparison with last year.

The BKV [Budapest Transport Enterprise] estimates 8.840 million passenger miles, 50 percent of the local mass transport work, which has been increasing for years at a very minimal rate, while a shift in proportions has been taking place in individual forms of transport: performance by the subway, the "small" underground line and buses has been increasing at a greater rate than the performance of streetcars, trolleys and HEV [Budapest Suburban Railway System].

The BKV work is directly affected by construction in the capital. This requires that increased attention be paid to the organization of mass transport: in 1981 primarily because of the construction work on the Arpad Bridge and Deak Square-Elmunkas Square Metro stretches. This year an emphasized task of the enterprise is organization to provide mass transport for new residential developments. Preparation for mass transport tasks associated with the 5-day week requires careful organizational work.

In rural mass transport performance in the five large cities will increase approximately 4.5 percent, while the performance increase in the other provincial cities will exceed 6 percent according to the plans.

In connection with the slower increase in the national economy, the national economic estimate has forecast a 1.1 percent increase (without pipeline shipment) in the other basic transport activity, goods shipments.

It is typical of the subbranch distribution of goods shipment performance that the increase in freight ton-kilometers of the highway transport enterprises is lower than that of earlier years. A few years ago the increase in performance around 6, 8 or even 10 percent was the estimate in highway goods shipments, but last year it was only 3.5 percent and this year only 2.4 percent (always compared to the previous year). This moderate increase in performance is in harmony with the implementation of the objectives of economic efficiency and energy savings.

MAV has projected fulfillment of 24.740 million freight ton-kilometers by shipping 133 million tons of freight. Compared to last year's performance, this represents a 2.5 percent increase. Railroads expect to reduce import performance by more than 1 percent, which is in agreement with the economic policy goal of reducing national economic imports.

The railroads plan to regain long-distance domestic freight from the highways by means of a more intensive commercial policy, increased incentives for early delivery and faster, better organized freight forwarding. They want to devote more care to training for unit consignments and to improve shipping techniques and technology. This year, according to the plan, approximately 54 percent of railroad freight ton-kilometers will originate in international shipping. To a large extent its successful completion will depend on the ability of the railroads in neighboring countries to coordinate with ours, and on the capacity of border stations to accept the shipments.

The VOLAN freight shipment plan calls for an increase of 2.6 percent in freight ton-kilometers compared to 1980, along with an average 0.7 percent reduction in its vehicle stock. The basic goal of the enterprise will be to accept and dispatch freight shipments from the community and from large freight dispatching places capable of being organized in a large-scale way in a comprehensive method, exploiting the benefits of large-scale organization and taking account of common interests.

In order to meet the needs of the people in a wider area and with improved quality, VOLAN also intends to expand its network of representatives and the proportion of rather small, load-carrying vehicles.

The 1,140 million freight ton-kilometers planned by Hungarocamion will exceed last year's performance by nearly 6 percent. In 1981 Hungarocamion must count on a further sharpening in the international competition for the freight market. As a result of this the objectives estimated for this year can only be achieved by means of the activity of a high-level business policy. According to predictions Hungarian foreign trade exports will increase by 7-8 percent. In addition to satisfying the requirements of Hungarian foreign trade, the enterprise will give preference to those contacts which are also beneficial from the standpoint of economy and the returned-goods situation. Thus, this year, they intend to organize a considerable portion of the traffic with German Federal Republic contacts. Hungarocamion plans to further develop its English contacts, which are increasing dynamically and are exceptionally economic, and to increase its traffic with Scandinavian countries.

On the basis of the position the enterprise has already gained, it expects an increase in traffic in the Near East and Middle East freight markets similar to that of 1980, with a dynamic boom after the Iran-Iraq war is over.

An increase of approximately 1-3 percent in the work of the delivery enterprises is the estimate, except for the EPFU (Building Materials Transportation Enterprise), where there will be an approximate 7 percent reduction in work. The reason for this is that the demand for the services of the enterprise will diminish because of a slowdown in construction industry work. In 1981 the delivering enterprises expect to cover a total of 1.200 billion freight ton-kilometers, compared to 1.228 billion last year.

MAHART planned to cover 7.650 billion freight ton-kilometers, including the work of leased boats. The enterprise estimated this performance in shipping 3.035 million tons of freight. Compared to the previous year MAHART has aimed at achieving a 1 percent increase in performance.

In international river traffic the volume between Soviet and Hungarian contacts amount to nearly half of the shipping, although a considerable amount is formed by imports of phosphates, the export of pellets and the export of iron goods from METALIMPEX. Domestic traffic is composed of the conventional goods: stone, gravel, homemade elements, cement, wood and so forth. The primary task of the enterprise in maritime shipments involves absolute fulfillment of the shipping demands of Hungarian exports and imports, while an increase in transit traffic, assuring an effective yield of foreign currency, is an important point.

After these statements let us mention the investment possibilities available to our enterprises to realize the tasks and objectives outlined above. The investment capability of approximately 18 billion forints will aid in the 1981 development of the transport enterprises (without pipeline shipments). In the area of state capital investments, 3.7 billion forints is the estimate for developing the Ferihegyi Airport and airport control, for constructing the E-D stretch of the Metro, for widening the Arpad Bridge and for redesigning the Florian Square.

The expenditure of 4.0 billion forints is made possible by the targeted investments relating to the development of the general traffic railroad network.

In the area of enterprise investments, the managing organizations budgeted 10.2 billion forints for development, with about 1 billion forints to be used for credit. MAV estimated about 200 km of track modernization, and the acquisition of 30 electrical and diesel locomotives, more than 150 passenger cars and half a thousand boxcars. Putting 700 buses and 3,000 trucks into service will help realize the objectives of highway transport. The enterprises will try to meet the needs of urban mass transit through the acquisition of 50 subway cars, more than 200 buses and 6 trolley buses.

In MAHART one passenger ship, one river tug and eight barges will be put into service.

MALEV included the purchase of two TU-154 type aircraft in its plan.

These then are the more significant developments which will help to satisfy the requirements levied on transport.

We have briefly surveyed the 1981 administration of the transport enterprises with a knowledge of performance objectives and developmental concepts.

Intelligent employment of the labor force will exert a basic effect on the administration of the enterprises. For 1981 the majority of transport enterprises planned to maintain or slightly reduce their manpower requirements, except for the enterprises of the urban transport subbranch, where fulfillment of the tasks on the transport level attained justifies the plan to use extra personnel.

The transport enterprises plan to achieve their 1981 tasks with 311,000-312,000 workers, compared to 310,300 the previous year. The MAV plan estimates an increase of 800 people, while the urban transport units count on an increase of approximately 1,000-1,400 employees. In the future in the area of highway transport they plan a reduction in the use of manpower, and expect a decrease of nearly 1,000 people. The objectives of the enterprises are to assure the necessary work force anyway by internal reassignments and by using incentive wage methods in key work areas.

The 1981 enterprise wage and income regulating system has changed in accord with the general requirements. The feature of general regulation has been reinforced and the sphere of written regulations based on individual judgment has been diminished. The wage increases in the enterprises planned for 1981 are about 4.5 percent, which corresponds to the estimates formulated in the national economic plan.



This year the enterprises plan on obtaining a profit of 14.3 million forints, 12.5 percent more than the results of last year. In all the enterprises estimated an approximate 7 percent increase in deliveries and an 8 percent increase in income.

Some greater or lesser differences appear between the enterprise computations of some subbranches and the national economy plan computations. The railroad, urban and air transport results are lower than in the national economy estimate, while the highway and waterway transport estimates are almost identical. The income and delivery estimates of the railroad transport enterprise differ from the national economy estimates by almost the same amount, with the deviation in results being nearly 300 million forints. This is a result of the fact that MAV finds its reality in the achievement of lower profits because of a reduction in side activities.

Although the summarized results of the highway transport enterprises are almost the same as those in the central calculations, the incomes and deliveries do differ. The extent and timing of increases in fuel prices during the year are primarily the cause of the uncertainty and difference. The enterprises want to implement changes occurring in expenses in their rates, and therefore there is a difference in both income and expenses.

With respect to income there is a difference of about 500 million forints between the ideas of the urban transport enterprises for 1981 and the national economy expectations. This means a profit of more than 250 million forints less than in the national economy estimate. The difference is decidedly due to the different judgment of price increases and passenger transport income.

The income estimates of MALEV exceed the material in the national income computations by some 500 million forints, but expenses are 800 million forints higher than the national economy estimate, and therefore the results are not at all on the same level.

Tax payments will decidedly increase from the increased profits of the transport enterprises in 1981, by almost 1.5 billion forints. In all the developmental base will show a minimal increase, since it will increase only in railroad transport, while diminishing in the enterprises of the other subbranches. The total of the reserve fund and the dividend fund will increase by very little.

In accord with their capabilities, the transport enterprises will try to contribute to improving the balance situation of the national economy by increasing their foreign exchange earnings and thriftiness. They have set themselves the goal of producing some 13.5 billion forints in net foreign exchange in 1981, compared to 10.4 billion forints in 1980, a decisive portion of which will originate in non-ruble accounted traffic.

In summary it can be stated that in their major lines the 1981 enterprise plans are in harmony with the national economic expectations. There is a possibility of the enterprises continuing intelligent management on the basis of the plans. Considering the realistic possibilities and needs stemming from the development of the national economy, it can be said that the planning work of the enterprises has improved. A positive judgment can be made that the enterprises are trying hard to utilize the labor force more efficiently and to manage energy more thriftily.

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## BRIEFS

AGRICULTURAL MECHANIZATION--There will be no significant change in the ratio of domestic to imported agricultural machinery as compared to the previous plan period. Eighty-six percent of the machines will be Hungarian-made or imported from socialist countries. A considerable volume of imports from capitalist countries will be required to meet demand for a varied supply of machinery. Average performance of tractor motors will increase to 75 kilowatts by 1985. At the same time the tractor park will decrease by 10 percent. This indicates a 5-percent growth in tractor capacity; thus we will attain a tractor motor performance of 3 million kilowatts. There will also be a 5-percent increase in transport capacity including trucks and other forms of shipping. There is urgent need for more sowing machines of higher capacity: The goal is to be able to complete sowing in 8-9 days. Combine capacity will increase by 10 percent. This will permit completion of wheat harvesting in 14-15 workdays. More high capacity equipment will be needed for harvesting silage and hay. The performance of self-propelled silage harvesters will increase by 20 percent as compared to the preceding plan period; they will be capable of harvesting 170,000 tons per shift. Private plots and small gardens must be supplied with the equipment, fertilizer and seed that they require. The background industry and the commercial network must cooperate to achieve this. In 1981, 30,000 motorized hoes and one-cylinder tractors will be put on the market for small growers. There will also be a greater selection of small machines having an output of 3.5-7.5 kilowatts. In the interest of spurring small commodity production, import of tractors having an output of 16-20 kilowatts will begin. [Excerpts] [Budapest MAGYAR MEZOGAZDASAG in Hungarian No 7, 18 Feb 81 p 4]

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## ROMANIA

### OLTENIA COAL BASIN OPERATIONS: PROBLEMS, SOLUTIONS VIEWED

Bucharest REVISTA ECONOMICA in Romanian 6, 13 Mar 81

[Article by Vasile Boescu and Padure Bogdan: "Increasing Coal Production to the Level of the Economy's Needs" (Parts VI and VII) -- for previous installments see JPRS 76515 No 2046 of this series, 29 Sep 80 pp 79-88, JPRS 76826 No 2063 of this series 17 Nov 80 pp 45-55, and JPRS 77240 No 2085 of this series, 26 Jan 81 pp 57-62]

[No 10, 6 Mar 81, pp 2-3]

[Text] REVISTA ECONOMICA is continuing the work consistently carried out in support of the activities in the Oltenia coal basin (Nos 31, 33, 37, 51/1980) by presenting in this issue the results of the discussions held in the large mining units and thermal power stations in this region regarding the specific means of actions that must be adopted to increase the quantities and quality of coal extracted and to produce more energy at lower costs.

This year the mines in Oltenia have to achieve a plan that has risen to 33 million tons of coal extracted and delivered to the thermo-electric power stations in the region. The measures that were first taken last year and continued through a series of new technical and organizational actions have allowed the majority of the enterprises within the Oltenia Mining Combine (Motru, Lupoaia, Jilt, Rosia and so forth) to fulfill and overfulfill their physical plan for coal extracted for the first 2 months of this year. There is also significance in the achievement of increasing the quality of the coal delivered (through a better selection process during the extraction, transportation and storage phases), which exceeded an average of 1,600 kilocalories per kg for the entire combine during this period. Thus, a start of the activities in the new five year plan under good auspices occurred both with regards to quantity and the quality of coal extracted and delivered to consumers.

It is appropriate to also stress the fact that now each mine, enterprise and, in the end, each combine as a strategy for long-term action regarding the development of production, the specific needs for technological equipment and workers, and the parameters of quality and costs. Clearly, such a strategy, finalized in a broad program of action, contains not only determining elements, resources and factors for quantitatively and qualitatively increasing coal

production, but also the specific requirements facing all the parties involved in the production of more and cheaper electrical energy in the thermo-electric power stations that use coal from Oltenia, as well as the means of satisfying these requirements.

Carrying out the provisions of this strategy based upon certain broad studies conducted by specialists, researchers and workers from the mining and energy industries and from machine building units, will provide the production of electrical energy outlined in the five year plan under conditions of increased efficiency.

#### Thorough Preparation of Mining Facilities

The normal operation of activities and the regular achievement of plan provisions depend upon thorough preparation of the conditions to carry out production not only in mining, but also in other production sectors. Drawing conclusions from the shortcomings of the previous years that appeared primarily because of a failure to thoroughly prepare coal mining fronts on a timely basis, for this first year of the current five year plan complex measures were again taken on multiple planes in all enterprises and mines, as well as in the thermo-electric power stations. What directions and objectives are contained in the preparation program?

First of all, keeping in mind that the largest quantities of exploitable coal is found in open pits, we conducted an inventory of reserves both from a quantitative and qualitative point of view. After concluding such an inventory, for each pit and mine we established the quantity and quality of coal that was to be extracted monthly and delivered regularly to the thermal power stations throughout 1981. This action did not end with these measures: it is continuing throughout the current year to uncover new coal reserves. During this time, special core drillings will be made prior to the period of actual extraction in order to probe the scheduled strata of coal reserves. In 1980 alone, this will reach over 20,000 linear meters, and for the entire five year plan it will reach approximately 100,000 linear meters. We must remember the fact that we are not talking about carrying out some simple deep drillings, but rather of thoroughly understanding through these means the characteristics of the exploitable strata from the point of view of the quality of the existing coal and its caloric value, as well as establishing, with the help of the solid information thus obtained, certain delivery schedules for the coal that would be brought to the attention of the thermal power stations on a monthly basis.

Providing all the conditions for increasing the quantity and quality of coal extracted also makes it necessary to concentrate the efforts of all the parties involved for the purpose of supplying mining units with specific technical mining equipment at the approved and necessary levels. In this regard, the units of the machine building industry must contribute more actively to putting into operation 15 large excavators and 5 small excavators in the Oltenian basin (equipment provided by the Timisoara Mechanical Enterprise), as well as 6 pieces of waste disposal machinery (made by the units of the Ploiesti Industrial Central for Petroleum and Mining Equipment).

In order to ensure the start-up of all these by the end of 1983, it is necessary to pay more attention to the fact that a series of these equipments had overdue delivery dates, scheduled for delivery last year. In this case, the efforts made by the supplying units to recoup these delays will inevitably increase the stocks of unassembled technological equipment, causing certain bottlenecks in assembly operations at the consumer by overloading the available assembly resources in the mining units. In order to resolve this problem, it seems necessary that the supplier will have to more actively assist in assembly work at the consumer so that together they can carry out the very large amount of assembly operations that must be accomplished in a short period of time.

The concentration and better coordination of the efforts of these parties is also required to expand the work capacities at the other technological installations designed to provide the thermal power stations with an increase amount of high quality coal. We are talking about accelerating the rate of work for building and putting into operation in 1981-1982, alongside the major conveyor belts, 10 new crushing mills equipped with rotating crusher bars in order to break-up the coal and eliminate foreign materials, as well as building certain concrete or stone roads that will provide access to the entire length of the conveyor belts.

#### Completely Eliminating the Use of Crude Oil in the Production of Energy in Thermal Power Stations

Since, on the basis of the experiences in other countries that use inferior coal in the production of electrical energy, it was found that during the burning process it is possible not to use a single gram of crude oil, something which has great importance under conditions where the price of crude is continually increasing and when opportunities for imports are becoming more difficult, measures were established to convert all the installations at the Rovinari, Turceni and Isalnita combined to such a system. To this end, actions are foreseen to introduce new technology regarding the preparation of coal for burning (better selection and finer grinding), the improvement of burning installations and the use of certain more rational procedures for placing the coal into the furnace and so forth. Certainly, these measures cannot be applied all at once. But, it is possible that in a short period of time the new technology can be experimented with, expanded and then generalized. Thus, we will arrive at large savings in hydrocarbons that can be used in other fields with greater efficiency and at the maximum use of inferior coal reserves.

The total replacement of crude oil in the process of burning coal in the production of electrical energy in thermal power stations makes necessary, as we have pointed out, the use of certain new technologies throughout the entire process that are designed to contribute both to the growth of the quality of the coal extracted and to the improvement of the technological process of using it in energy generating equipment. In order to attain these objectives, it seems clear that providing the quantities of coal at the levels demanded by the thermo-electric power stations at Rovinari, Turceni and Isalnita is not enough. The efforts must



also be corroborated in the direction of increasing the quality of the coal through its homogenization so that each ton of coal will have at least 1,500 to 1,600 kilocalories per kilogram. This will also permit a better operation of the installations in the power stations and an increase in efficiency. Keeping in mind the existing deficiencies in this area and the experience of certain mining operations, measures were established that will prevent shortcomings and will lead to ensuring a higher quality coal. For example, it was found that by using large excavators of a 1,400 m<sup>3</sup> per hour capacity on coal faces with less than a 40 cm intercalation, the coal contained a significant amount of dirt. In order to avoid such situations, measures were outlined so that the mining of coal faces with strata less than 40 cm will occur in selective extraction process using small excavators of a 470 m<sup>3</sup> per hour capacity.

Another area that was discussed was the establishment of certain measures that will lead to the situation where a piece of equipment used in the pit will uncover an increased amount of coal with one pass that is of overall higher quality than that currently produced. In this regard, we must keep in mind the lengthening of the coal extraction technological process in the pit by increasing the travel of the excavator arm in removing the waste strata from 5 meters (the current distance) to 25 meters, which will ensure increased productivity in the uncovering process. At the same time, by bringing into the excavator working group a number of bulldozers to clear away the waste that falls from the excavator cups, we can achieve a better clearing away of the strata over the coal that has been discovered.

And, the problem of improving the quality of the coal was also the object of a study dealing with underground mining. Among other things, we found here that in using mining equipment that makes a two meter cut into the coal face where the coal strata is five meters high in places, we have a situation where it is necessary to make another pass with the equipment in order to mine the entire quantity of coal. In this case, in addition to decrease productivity, a good part of the coal is ruined and mixed with waste, since when there is a partial extraction of the coal breaks occur in the roof of the shaft and so forth. In order to accelerate the mining of coal and increase the efficiency of the equipment, it was established that in all cases where the underground mining coal faces are somewhat higher we will use complex equipment of greater height that can cut 4.5 to 5 meters of coal in a single pass. This requires an increased creative effort in the machine building enterprises to speed up the production and operation in 1981 of an underground combine and mining complex, in addition to the four pieces of greater height mining equipment, needed for this increased dimension. This will permit increasing the efficiency of the coal mining from 1,500 tons per day to 3,000 tons per day.

Naturally, ensuring coal mining operations under conditions of high productivity and quality - so it can arrive at the thermal power stations in an appropriate condition - also requires other measures. We are speaking of the organization of certain buffer storage areas at the supplier or the consumer. In addition to the



fact that such deposits must provide at least a month's worth of coal needed by the thermal power station, it must also have the appropriate equipment for homogenizing the coal received from various enterprises. It is extremely important for the thermal power station to receive an homogeneous coal with a high calorie value. Thus, the conditions for using the steam boilers improve, the entire process of producing energy can be controlled, interruptions in operations can be avoided, damages can, to a large degree, be avoided and so forth. In this regard, it is especially important to accelerate the start up of a new crusher mill and modernized equipment for dumping and removing the coal from the coal storage area.

We have merely pointed out several principal measures designed to contribute to increasing the efficiency of the thermo-electric power stations by regularly supplying them with quantities of coal at the established levels and of the quality and at the costs outlined in the plan. There are, however, other measures which complete the program of measures for the mining units and the electrical energy producing units so that the provisions of the current five year plan for these fields can be achieved and even overfulfilled. In order to achieve these, it is necessary for the machine building industry, the units of the chemical industry and others to make sustained contributions to the efforts of those working in the Oltenia basin.

The production of certain high efficiency equipments for coal mining and the introduction of certain new installations in the thermal power stations, brought about by the application of a new system of producing energy solely on the basis of coal, require an intensive activity in the specialized machine building units and the finding of solutions for their production in the shortest possible time. Keeping in mind the machine building industry's experience in building mining equipment and equipment for the thermo-electric power stations, it is expected that this year it will find solutions for a good part of the requested equipment, requests that were established by common agreement between the user and builder. In order to produce electrical energy solely on the basis of coal, it is necessary to build on a priority basis through common efforts certain types of coal crushing mills and concentrators that will separate coal dust from waste particles, as well as certain post-burning grids that will permit the complete combustion of the coal.

The implementation of all these measures and actions, as well as others regarding the improvement of transport activities and the mining and use of lignite, with which we will deal in a future edition of this magazine, will supply the thermo-electric power stations with coal of a higher caloric value and in the amounts outlined in contracts.

[No 11, 13 Mar 81, pp 6-7, 14]

[Text] REVISTA ECONOMICA is continuing the actions consistently carried out in support of the activities in the Oltenia coal basin (REVISTA ECONOMICA, Nos 31, 33, 37, 51/1980 and No 10/1981) by presenting in this issue the conclusions of

the discussions organized in the large mining units and thermal power stations in this region regarding the new specific means of action that must be adopted in order to increase the quantity and quality of coal extracted and to produce more energy at lower costs.

The mining and effective supply of larger amounts of high quality, lower cost coal to the thermal power stations represent an unquestionable priority within the framework of the efforts being carried out throughout the country to quickly develop a base of raw materials and energy. Within the framework of these concerns, there are significant tasks for those units which carry out their activities in the Oltenia coal region. In order to completely fulfill this year's plan provisions, as we showed in the first part of this article, these units have a well-substantiated strategy for action that is rigorously coordinated with the strategies of the thermo-electric power stations and the units of the machine building industry which supply the technical equipment, and with the specific measures and responsibilities that will, in the end, lead to producing increased quantities of energy at lower costs. For the purpose of implementing these strategies, a large concentration of forces is currently being achieved in the Oltenia coal basin. The rigorous coordination of the operation of these forces under the guidance and broad support of the county party committee and the other local party and state organs has permitted the extraction of a large quantity of energy-producing coal during the first 2 months of this year. It is important, however, that the good experiences obtained from the outstanding units will continue to be extended and generalized so that the plan provisions will be completely fulfilled. In support of carrying out these demands, we will continue to deal with certain problems related to improving activities in achieving investments and rationally using the means of transport to get the coal from the point of extraction to the thermal power stations, as well as related to effectively attaining the projected parameters in the operation of all the equipment for producing electrical energy and operating the equipment at the highest possible levels.

#### Putting New Production Facilities Into Operation On Time

Among the major problems of the combine is the timely creation of as many and as productive coal faces as possible. In order to do this, special attention is given to achieving the investment program. In this case, we are speaking of carrying out uncovering operations in the areas slated for new pit mining or for underground shafts, as well as carrying out preparatory projects (access roads, draining and so forth).

The fact that such a problem is dealt with responsibly is demonstrated to us through the achievements in the first months of this year: several mines were put into operation having a production potential of between 800,000 and over one million tons of coal per year. Thus, in the Gorj basin at the Jilt enterprise the Cosmanesti mine was put into operation; at Pesteana-Nord, the first technological line at a new pit began to produce; and, new mines were put into operation in several areas in Mehedinți County. New facilities, equipped with large coal extraction complexes, mechanized transporter-conveyors and so forth, permit increased efficiency and the delivery of significant quantities of coal to the users.

Similarly, several other open pit mines and underground mines are scheduled to be put into operation this year. The focusing of the activities of the responsible authorities in order to achieve all the scheduled projects in accordance with the plans will ensure the operation of the high capacity coal faces for this year and 1982. This will have great importance for the proper operation of the coal extraction projects and the regular delivery of coal to the users.

Special attention must be given to carrying out uncovering projects - removing top layers of dirt, draining, organizing roadways, showing the quantity and quality of the coal and so forth. Given that such activities require a concentration of human and mechanical forces, we must permanently achieve a proper organization so that all the projects will be carried out in accordance with the provisions. Unfortunately, there still are shortfalls in the regions of Tismana, Rovinari, Jilt and so forth. And, such delays in carrying out the preparatory projects lead to a restriction of the coal mining fronts and to the impossibility of quantitatively and qualitatively meeting the requirements of the consumers.

No less important in this area is the supply and timely assembly of high productivity equipment for the mining of coal itself. Unfortunately, in some pits there are delays in assembling such equipment because, on one hand, of the failure to be supplied with certain pieces and subassemblies from the manufacturer within the timeframes outlined in contracts and, on the other hand, of a lack of support and necessary technical assistance. It is the duty of both the supplier, that is, the units of the machine building industry, and the user to closely cooperate, effectively resolving all the problems that arise in assembling and putting into operation on time all the equipment and installations contained in the mining equipment program.

Another area that involves the interests of both the units in the region and the entire country is the return of the lands from which coal was extracted to the agricultural sector in as short a time as possible. It is true that recently progress has also been made in this area. Despite this, there is still a gap between plan provisions and actual achievements. Specifically, there is a shortfall of 1,400 hectares of land that are to be turned over to be fertilized. Also keeping in mind the surface area that must be turned over to agriculture this year, the number of hectares reaches approximately 5,000. This is a large area which, when returned to agriculture as quickly as possible, will provide a surplus of agricultural products with which to supply the populace. That is why we feel that this problem must also be considered by all the parties involved with a maximum of amount of responsibility, respecting the timeframes and fertilization measures established so that the 5,000 hectares are agricultural land can be returned to production.

#### Improving the Transportation Process from the Mining Areas to the Power Stations

Certainly, it is not just important to extract a larger quantity of coal, but also to transport it as fast as possible to the thermal power stations. It is necessary to continue to make increased efforts to improve the entire process of transporting from the places where it is extracted to the thermal power stations and from

the conveyor belts in the mines and pits to the storage areas at the mining units and at the thermal power stations, and from there to the installations for concentrating and burning the coal in the thermo-energetic power equipment.

In dealing with this complex action program, we began with the requirement to conceptually improve the coal supply system by using the most efficient routes from the point of view of minimizing transportation costs. Specifically, on this basis we moved to surrounding certain thermal power stations with mining operations. According to this system of organization, the Rovinari thermal power station is surrounded by pit mines in the region of Rovinari and the mines at Rogojelu, Pinoasa and, partially, Urdari; the Turceni thermal power station has the mines and pits in the areas of Jilt, Pesteana-North and South and, partially, Urdari; the Inalnita thermal power station has the mining units in the area of Motru, including the Lupoasa open pit mine. The application of this practice in the shortest possible time will lead to the elimination of the very costly and uneconomical transportation currently carried out by trucks from the pits and mines to the thermal power stations. To do this, however, it is necessary to undertake increased efforts on the part of all the parties involved to:

- Consolidate the major coal transportation conveyor belt network, both with regards to extending it and to updating its equipment with auxiliary equipment capable of ensuring a higher quality of the transported product. In this regard, it is necessary for the production units to give increased assistance to the users in the Oltenia coal basin in order to cover the transporter conveyor belts so as to protect the extracted coal from bad weather and deterioration over a distance 36.7 km, as well as to build along these major transporter belts during 1981-1982 a series of 10 installations equipped with rotating crushing bars to break up the coal and eliminate foreign debris.

A situation that must be given maximum attention is the one regarding ensuring a continuous transportation process by eliminating the breaking of rubber transporter conveyor belts, as well as the one for effectively repairing them should they be damaged. This problem is even more important is the fact is taken into consideration that in past years 33 percent of the total downtime caused by accidental interruptions were the result of a break in the rubber conveyor belt. That is why it is necessary for the producer chemical units to have increased concern for solving the hot and cold vulcanization process for the rubber conveyor belts. The introduction of such a solution into the production process has been delayed for years even though there are numerous promises about doing this, which are annually made by the responsible enterprises, but not honored. The result of this is that the number of hours of "accidental downtime" for this equipment is kept at a high level. On the other hand, it is necessary to give much more consideration to the opinion of the users in the Oltenia basin so that the supplier of rubber conveyor belts will continue to improve the technical parameters for durability for these products so that they will have a longer lifetime under temperature conditions below 5°C, which frequently occur during the winter.



- Extend railroad transportation which, instead of liquid fuels, can use inferior coals that are available in the region as fuel. Expanding the railroad line network will, at the same time, permit an increased continuity for transportation during the winter, eliminating the difficulties that occurred in past years because of breaks in the rubber conveyor belts when the temperatures fell to low levels. The concerns of the responsible authorities are directed, in this regard, towards the fastest possible start of operations on the railroad line that will supply the Rovinari thermal power station and another line from Cocoreni to the Turceni power stations. In this way, where specialists consider it to be opportune, we should have a concentrated effort so that, instead of conveyor belt transportation which has a high cost of approximately 106 lei per ton, the coal can be transported by railroad at an overall cost reduction of 35 percent.

- Extend the road network to increase accessibility to the coal in the open pits and to the coal stored in different concentration areas along the major transport conveyor belts. We are speaking of accelerating the work to put into use approximately 200 km of roads, as well as ensuring access along the major transporter conveyor belts on concrete or stone roadways (117.7 km during 1981-1983).

- Effectively adapt transportation equipment to the specific nature of the activities in open pit coal mining. Thus, the specialists in the combine feel that the current models of trucks delivered by the machine building units are not always appropriate for the specific difficult working conditions imposed by this type of transport. This frequently causes interruptions in operations and a decrease in the amount of coal transported to the consumer compared to the plan provisions. For the specific requirements of open pit mining in the Oltenia basin, it is felt that it is necessary to have truck types that are equipped with transmissions and hydraulic systems of greater capacity and strength than those provided to date.

- More effectively receive the stocks of coal delivered to the thermo-electric power stations by the mining units. Such an action must especially be taken more effectively by the Turceni thermal power station, which, although it should daily accept 20,000 tons of coal, is only receiving 12,000 tons per day, with the rest of the coal remaining behind in the storage areas at Jilt and Cocoreni.

#### Using the Power-Generating Equipment at the Thermal Power Stations at High Levels

In addition to the especially created framework resulting from the technical-organizational measures taken in the mining units in order to extract and deliver coal at quantitatively and qualitatively higher levels, there are also the valuable actions established at the consumer thermal power stations. These are actions designed to facilitate the growth of electrical energy production by using each group of power-generating equipment at the projected levels. Clearly, the studies and analyses that were carried out regarding the results obtained in 1980, as well as during the entire preceding five year plan, also showed in the case of the thermal power stations in Oltenia, in addition to some shortcomings on behalf of the suppliers of coal and equipment, that there were different shortcomings of their own in the management of the technological processes, in the effective



completion of repairs and so forth. Keeping this in mind and remembering the task of moving in the shortest time possible to producing energy solely by using coal in the steam boilers, without using a single gram of crude oil, appropriate actions and measures were established.

Thus, for each group of energy-producing equipment to produce at the nominal power level (in the majority of cases 330 MW), the first step that was required was to increase the quality of the coal used for fuel, a fact that required supplying two units with a number of mills in order to provide an appropriate fuel for an intensive burning process, one capable of generating high temperatures. Concomitantly, there was a need to produce certain concentrators that could separate the coal dust from waste particles. This measure will permit the qualitative portion of the coal (the ground coal with no waste content) to be placed in the base of the furnace, thus permitting a complete burning of the portions above it which still contain some impurities. The first group of concentrators will be built at the Rovinari thermal power station by 9 May 1981, while the rest will be built at the beginning of the fourth quarter. Along these lines, some improvements were also required with regards to the furnaces. For example, it was established as necessary to introduce a rotating post-burning fire grate that will encourage the complete burning of the coal (in the current technology, a portion of the coal is not burned and goes up the stack along with the ash), an important step both with regards to the maximum use of the coal and from the point of view of reducing the amount of ash that is exhausted. A series of improvements also were and will be made to the basic installations during capital repairs so that the entire power-generating group can operate without interruptions for the entire planned period at the highest possible levels.

Measures and actions that will facilitate the rational and effective use of the energy-producing installations were outlined in each of the three thermal power stations (Rovinari, Turceni and Isalnita) in order to increase the continuity in obtaining coal. The number of storage areas containing the optimum amount of coal in order to meet at least 30 to 35 days of operation. Through this, situations will be eliminated where the necessary amount of coal was not available (especially during the winter) of the necessary quantity and quality. As a result of the processing that will take place in the storage areas, they will have an homogeneous stock of coal from a quality point of view and they will dry and eliminate foreign elements from the coal (waste, dirt, rock and so forth). For the proper operation of certain large storage areas (1.3 million ton capacity), it is also necessary to provide the equipment to handle the in and out movement of the coal in a mechanized manner. In this regard, in accordance with the specialists in the units specializing in the construction of mining equipment, types of equipment and power machinery specifically designed for storage area work was identified to be produced in the shortest possible time.

These are, naturally, special concerns which, if fully resolved, will permit attaining the objective to produce energy with the existing equipment at a level higher than in previous years. Moreover, in the first 2 months of this year, the thermal power stations at Rovinari, Turceni and Isalnita, operating

normally, came to produce nearly 30 percent more electrical energy than during the corresponding period in 1980. This is, truly, an achievement that marks a new, decisive stage where the largest thermal power stations in the country will come to produce at the nominal power level of the equipment they have, and will thus provide increase amounts of electrical energy at the lowest possible price.

Of special significance in the achievement of the programs regarding the rational management of coal and the growth of energy production is taking into consideration the proposal that the production units of the Oltenia Mining Combine and the consumer thermal power stations at Rovinari, Turceni and Isalnita, which are all within the same industrial complex, be unified from an organizational point of view into a single central for extracting and using coal, just as this complex mining-energy activity is organized in other countries in the world. The proposal deserves all the attention of the parties involved because of the advantages that it has: saving a significant number of technical and economic personnel who are currently involved in the separate recording and documenting of the coal at the producer's end and its use as a final product and a raw material; concentrating efforts both in the area of mining and in the processing of the coal towards an essential objective of the economy: producing electrical energy in an increased amount at reduced costs. Also in this regard, there should be a more careful examination of the proposal that the basic physical indicator in evaluating the activities carried out in the mining sector be a certain quantity of gigacalories (and not the current one of tons of coal extracted), while at the level of the combine for extracting and using coal the indicator should be kilowatt-hours of energy produced.

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